

REMARKS

Claims 12-22 are pending in the present application. Applicant has amended claim 22 to recite the source of parameters used in the process of the invention. Support for this amendment may be found in the specification at p. 2, lines 37-39. No new matter has been added to the amended claim. Reconsideration of the claims is respectfully requested.

CLAIM REJECTIONS

35 U.S.C. 103(a) Rejection

The Examiner has rejected claims 12-22 under 35 U.S.C. 103(a) for purported obviousness over U.S. Patent No. 5,772,908 to Richard ("Richard") in view of Japanese Patent Publication No. JP 2003181625 ("the '625 publication"). Claims 12 and 22 are the only independent claims and dependent claims stand or fall with their independent claim. Applicant believes that neither Richard nor the '625 publication, alone or in combination, teaches every element of amended claims 12 and 22, so obviousness does not exist.

Claims 12 and 22 teach a method for making the decision whether to reuse or reject a refractory plate of a slide gate valve used for the control of the flow of molten metal during the casting of said metal from an upper vessel towards a lower vessel. A set of parameters, at least one of them being conventionally measured during the casting, is determined during successive uses of the plate. The determined values are then compared to threshold values.

Richard discloses a refractory plate used for controlling the flow of molten metal. The plate is brought into the plant or workshop to inspect for wear. The plate is replaced if it has been damaged. Parameters determined during this inspection are proper to the plate. Richard does not teach the determination of parameters conventionally measured during the casting.

The '625 publication discloses a device for performing measurements on the bore of a plate. The linear measurements performed by this invention are proper to the plate. The '625 publication does not teach the determination of parameters conventionally measured during the casting.

Combining Richard and the '625 publication would, at best, produce a device or process for measuring a parameter intrinsic to a plate, and deciding whether to replace the plate on the basis of this measurement. The combined art cited teaches only the use of a single measurement rather than the plurality of measurements that is required in the present invention. Furthermore, neither of the references cited teaches the use of parameters conventionally measured during the

casting as a factor in the process of deciding whether to replace a plate. The combination of Richard and the '625 publication does not teach the determination of a set of parameters, at least one of them being conventionally measured during the casting, during successive uses of the plate.

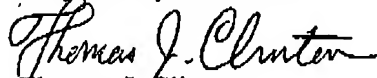
Neither Richard nor the '625 publication suggests, alone or in combination, the device or method of the present invention. The methods of Richard and the '625 publication require actual inspection of the plates between two casting operations; these operations cannot be performed above a tundish or when a ladle is full of steel. The method of the '625 publication requires interrupting the casting operations to introduce the measuring instrument to measure the wear of the plate bore. The claimed method of the present invention requires only the measurement of physical parameters normally measured during the casting process. The operator is therefore in a position to decide whether to keep or reject the plate without even having to approach the ladle.

Applicant respectfully submits that claims 12-22 are patentable over the prior art. Early and favorable action is earnestly solicited.

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Respectfully submitted,


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